



Opinion

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Marine Litter: A Rising Menace



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Opinion

Microplastics have been widely recognized as a potential marine litter. Because of tiny size, marine creatures consume them which then directly or indirectly can enter human food chain. It is no wonder that microplastics have been found in blood vessels of living creatures. Over the past few decades, there has been a sharp increase in the demand for plastic goods. Owing to several merits such as resilience, adaptability, lightness, and affordability, their use has skyrocketed. As per reports, in 2019, 353 million tons of plastic waste were produced globally, and 460 million tons of plastic were produced annually. According to the Organization for Economic Cooperation and Development, landfills received about 50% of the plastic garbage produced in the same year [1,2]. The developed as well as developing nations are increasingly using plastic products. As per survey by Center for Science and Environment, India, 40% of annual consumption within the year 2021-22 is added to plastic garbage after the initial use [1]. Accordingly, huge chunk of single-use plastic accumulates throughout beaches, adding to the rising problem of marine litter that threatens aquatic life [1-5]. Human activity in India generates about eight million tons of plastic garbage to the ocean.

Primary Sources

The threat of marine litter is primarily caused by land-based sources, including dump sites which are nearer to coastlines or riverbanks, flood waters, industrial outfalls, discharge from storm water drains, untreated municipal sewerage, beach litter, tourism, fishing, ship breaking yards, defense-related facilities, automobiles, industrial wastes, natural events, etc. Likewise, other sea-based sources that contribute to it include ghost nets, natural occurrences, offshore mining and exploitation, garbage dumping, waste from ships, fishing vessels, and other public transportation and research facilities, among others [1-6]. Even the tributaries of rivers also discharge about 15% to 20% of their plastic garbage into the ocean. If this trend continues, plas

tics will outnumber fish species by 2050 as per research predictions. Additionally, some animals may bio absorb leached toxins, endangering human health. To protect both human and environmental health, this complex, multifaceted issue must be stopped as soon as possible.

As per sustainable development goals, there should be considerable boycott of marine pollution of all types, particularly from land-based activities, including marine debris and nutrient pollution. The data suggests that out of annually produced overall wastes, a few portions of it goes for treatment and recycling while major portion emerges as municipal wastes. The discharged municipal solid trash takes the typical route of natural waterways and becomes part of marine litter. If the root causes of the huge chunk of plastics piling on ashore are concerned, the main contribution comes from single use plastics. Even though, regulatory bodies is outlawing the production, distribution, use, and storage of single-use plastic product, it is not so much effective. Via different awareness campaign as well as planning, it is intended to check it. However, the outcome falls short of expectations since people continue to use plastic products that have been outlawed, leaving waste in municipal trash, on beaches, and in the ocean. Producers, importers, and brand owners (PIBO) and producer responsibility organizations (PRO) are only concentrating on polyethylene terephthalate, hydrocarbon polymer, and low-density polyethylene-based plastic products when it comes to Extended Producer Responsibility (EPR). Since they are not interested in the remaining plastic products, they are left to burn or end up as marine debris. Due to the requirement for effective EPR policy enforcement, several waste plastic collection facilities led by PIBO and PRO must be established around the nation. However, temporary fixes like coastal cleaning are insufficient because it's still possible to find abandoned plastic, glasses, thermophones, cigarette butts, fishing gear, and other multi-layered plastic things [1-6].

Road Map Ahead

It is high time that there must be ban on multi-layered plastic packaging items. There should be stringent and punitive measures for defaulters. Likewise, robust Marine Litter policy should be implemented where identification as well as remedies are well defined. Meanwhile, overcrowding of coastal areas by unplanned urbanization should be brought under control via strong enforcement as well as penalty measures. However, support from general mass is hugely required for effective implementation of these to curb this growing menace of marine litter [6,7].

There should be strict implementation and monitoring of Coastal Regulation Zone and Special Area Planning guidelines in order to curb haphazard constructions along the coastlines. A National Marine Litter Policy needs to be formulated as early as possible.

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